REMARKS

The last Office Action of August 1, 2008 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 11-21 are pending in the application. No claims have been withdrawn from further consideration. Claims 11 and 19 have been amended. Claim 12 has been canceled. No claims have been added. A total of 10 claims is now on file. No amendment to the specification was made. No fee is due.

Claims 11-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 6,337,749 to Härtel ("Härtel") in view of U.S. Patent No.: 6,300,595 to Williams, ("Williams").

REJECTION OF CLAIMS 11-21 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER HÄRTEL IN VIEW OF WILLIAMS

The Examiner's rejection is traversed on view of the amended claims 11 and 19.

Applicant has amended claims 1 and 19 to recite the three-dimensional work piece in the body of the claim such as for example a mold, or a shaped article such as used for the interior of a motor vehicle and to thereby patentably distinguish over the prior art. Support for the amendment is found in the description and also specifically in paragraph **[0007]**. Both Härtel and Williams do not teach the application of a surface structure on a three-dimensional work piece or object.

In the present invention work areas are selected which can be approximated by polygons whose corners are in one plane and each polygon has the exact distance of the focal distance to the laser optics and vertical to the direction of a laser beam in a central position of deflection mirrors of the scanner

and entirely within the focal cuboid. Since the laser must be so oriented, the laser is thus programmed so that the many planes of the tree-dimensional object or work piece can then be treated by the laser. The present invention distinguishes from the prior art in that in both Härtel and Williams there is always a two-dimensional work area, whereby a three-dimensional structure is provided by the surface treatment., however, the surface plane is always two-dimensional.

The Examiner cites Härtel as disclosing or teaching from a work piece having an arbitrary shaped three-dimensional surface, (Office Action page 2 para. 3). There is no reference in Härtel to a three-dimensional work piece. The portion in Härtel the Examiner cites is as follows:

> *Because this signal component obviously also is a depth signal, recesses shaped like grooves are produced by the signal component in the work piece surface, where the grooves may correspond s for instance to the folds of natural leather.*

Clearly, there is nor reference to a three-dimensional article or work piece, especially not one that can have any shape. The surface treatment in Härtel produces a leather grain. Härtel does not relate to any other surface treatment.

Furthermore, in both Härtel and Williams the surface processing is carried out via an apparatus that is stationary. In Härtel this is a milling machine or a laser beam driven by the milling machine.

In contrast, according to the present invention, the entire three-dimensional topology of the work piece mold or tool to be treated is described via a network of connected polygons of various size and shape and are selected such that neither the laser orientation nor a change in distance between surface and scanner brings about an unwanted uneven material removal. Therefore each polygon is assigned a grey level bitmap.

Härtel is specifically directed to producing and only claims the treatment of a two dimensional surface to impart on the two dimensional surface a leather-like grain. This differs from the claimed invention since there the topology of the work piece is already of a three-dimensional shape.

Williams describes an engraving technique. As with the Härtel reference, the Examiner seems to confuse the production of a three-dimensional topology of an article with the treatment of a two-dimensional surface to impart a three-dimensional structure. Thus, removal of material in both Härtel and Williams is carried out with a stationary laser.

The Examiner states that applicant's argument regarding that machining a three dimensional object and cites col. 3, lines 24-34 as showing that the program relates to three dimensional objects, which can be engraved into a "mold surface". This does not show that the objects being treated are three-dimensional and nothing in the description nor the claims refer to three-dimensional objects, that is objects of any shape.

Williams is concerned with engraving but the engraving is on a two-dimensional substrate. Again, both Härtel and Williams are concerned with treatment of two-dimensional surfaces.

On page 5, paragraph 10 of the Office Action, the Examiner points to col. 2, lines 61 and 62 as teaching the features of claim 18. However, the referenced portion of the Härtel reference, does not exclude that in the formation of topological structure signal components are next to each other. Claim 18 requires that each polygon to be manipulated in each layer does not have a border portion in common with a previously manipulated polygon.

For the reasons set forth above, it is applicant's contention that neither Härtel nor Williams, nor a combination thereof teaches or suggests the features of the present invention, as recited in claim 11 or the dependent claims.

With respect to claim 19, the present amendment makes clear that the process is directed to a three-dimensional object and therefore patentably distinguishes over the Härtel reference. The Examiner allegedly finds all the features, except the bit map features, in claim 19 in Härtel. However, the Examiners' citations do not correspond to what Härtel teaches. Thus, the Examiner states that col. 3, lines 2-6 remove material from a three-dimensional surface. Of course, there is nor three-dimensional surface being treated in Härtel;

what is being treated in Härtel is a two-dimensional surface for imparting a three-dimensional surface structure. Furthermore, the Examiner states that in Col. 3, lines 50-52 the work surface is described as three-dimensional works surface when such is not the case. In col. 4, lines 22-27 again there is no reference in Härtel to a three-dimensional work piece where the sum of the work areas correspond to the surface of the workpiece layers correspond to the surface structure of the work piece. Also, Härtel does not teach superposed polygon networks, all that is disclose is that cells are irregular and preferably randomly increasing farther away from the nuclei; cell structures maybe superposed. Neither does Härtel teach in col. 3, lines 50-58 or in col. 2, lines 23-28 the bit map from a parallel projection of the master bit map.

The Examiners admits that Härtel does not disclose nor teach providing one or more master texture bit maps defining two-dimensional spaces and wherein three-dimensional corners of the polygon correspond to the two-dimensional image spots in one or more of the master texture bitmap. Williams does not disclose the three-dimensional corners of the first polygon network in the three-dimensional work piece (col. 2, lines 35-40) only the surface structure imparted that is designated by a grey level map.

For the reasons set forth above, it is applicant's contention that neither Härtel nor Williams, nor a combination thereof teaches or suggests the features of the present invention, as recited in claim 11 claim 19 or the dependent claims.

Withdrawal of the rejection of claims 11-21 under 35 U.S.C. §103(a) and allowance thereof are thus respectfully requested.

CONCLUSION

Applicant believes that when reconsidering the claims in the light of the above comments, the Examiner will agree that the invention is in no way properly met or anticipated or even suggested by any of the references however they are considered.

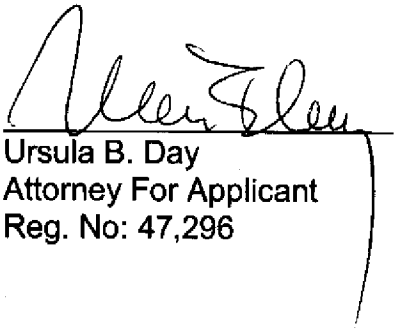
None of the references discloses a process having the features as recited in the claims.

In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

By: 

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